



AF/3619

Attorney Docket No. ATI-207

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES**

#18
4-11-01

Re: Application of: David S. BREED et al.
Serial No.: 09/437,535
Filed: November 10, 1999
For: Method and Apparatus for Controlling Deployment
of a Side Airbag
Examiner: Toan C. To
Art Unit: 3619

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REPLY BRIEF UNDER 37 C.F.R. §1.193(b)

Honorable Commissioner for Patents
Washington, D.C. 20231

April 3, 2001

Sir:

In reply to the Examiner's Answer dated March 12, 2001, applicants reply as follows.

It is noted that in the undersigned's copy of the Office Action dated September 21, 2000 (Paper No. 9), claims 20-22, 24, 25, 28-30, 32 and 33 are rejected "under 35 U.S.C. §102(b) as anticipated by **Kaji et al.** or, in the alternative, under 35 U.S.C. §103(a) as obvious over **White et al.**" (pg. 5). According to the Examiner in the Response to Argument portion of the Examiner's

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Brian Roffe, Esq. 

Answer, these claims were rejected “under 35 U.S.C. §102(b) as anticipated by Kaji et al. or, in the alternative, under 35 U.S.C. §103(a) as obvious over **Kaji et al. in view of White et al.**” (emphasis added). Thus, there appears to be some inconsistency in what was the rejection of claims 20-22, 24, 25, 28-30, 32 and 33 in Paper No. 9.

The Examiner counters the arguments that Kaji et al. does not disclose the claimed methods and that it would not be obvious to modify Kaji et al. to provide the claimed method steps by stating that the rejection is actually Kaji et al. in view of White et al. If this is the case, then why are claims 20-22, 24, 25, 28-30, 32 and 33 still rejected under 35 U.S.C. §102(b) in view of Kaji et al. Has this rejection been overcome by the arguments in the Appeal Brief?

Moreover, the Examiner citation of MPEP §2113 would appear to be addressed to a product-by-process claim wherein an alternative rejection based on section 102 or section 103 can be made. Claims 20-22, 24, 25, 28-30, 32 and 33 are believed to be product-by-process claims.

Also, claims 20-22, 24, 25, 28-30, 32 and 33 appear to have been rejected as being obvious in view of White et al. alone, i.e., the Examiner takes a position that “it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify White et al. to include the claim[ed] method.” This rejection does not mention anything about Kaji et al. and would appear to rely on White et al. as a primary reference. Thus, the arguments against White et al. alone (Issue 2 in the Appeal Brief) were responsive to this rejection and not irrelevant as deemed by the Examiner.

In view of the foregoing, clarification whether claims 20-22, 24, 25, 28-30, 32 and 33 have been rejected only under 35 U.S.C. §103(a) as being obvious over Kaji et al. in view of White et al. is respectfully requested.

Since the rejection of claims 20-22, 24, 25, 28-30, 32 and 33 under 35 U.S.C. §103(a) over Kaji et al. in view of White et al. was not addressed in the Appeal Brief, because it was not present in Paper No. 9, applicants comment as follows:

There is no teaching or suggestion provided by Kaji et al. or White et al. supporting the proposed combination of references to render claims 20-22, 24, 25, 28-30, 32 and 33 unpatentable, and therefore the combination can only be made with the use of hindsight reconstruction, which is impermissible.

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At the time the invention was made, one skilled in the art would not have considered controlling deployment of a side airbag based on the position of the occupant or a part thereof. Side airbags and steering-wheel mounted or frontal airbags are quite different in nature and it would not have been obvious to one skilled in the art to control deployment of a side airbag based on the position of the occupant in light of the disclosure in White et al. to control deployment of a frontal airbag based on the position of the occupant relative to fixed interior structures.

According to White et al., the position of the passenger before operation of the occupant restraint is used to determine the rate at which the passenger must be decelerated, relative to fixed interior structures, by the occupant restraint to prevent injurious contact therewith (col. 1, lines 47-53). It is problematic if a passenger is decelerated at a lower rate than required based on his or her position relative to the fixed interior structures because the passenger may strike the fixed interior structures and suffer an injury (see col. 1, lines 53-62). A major problem arising from use of a side airbag is not related to optimizing the deceleration of the passenger to prevent contact between the passenger and fixed interior structures. Rather, as set forth at page 2, lines 27-29 of the application, the most significant problem associated with deployment of a side airbag is when a child or other person is leaning against the deployment door of the airbag. In this case, the

deployment of the airbag at a high velocity will exert a large force against the child, propelling the child toward the opposite door and very likely causing significant injury. The overriding concern for control of a side airbag is thus not to decelerate the child at the optimum deceleration rate to prevent contact with fixed interior structures but rather to prevent deployment if the child is leaning against the deployment door.

In view of the differences between the main objectives of a position determining system for use with a frontal airbag and a side airbag, and the fact that White et al. is intended to solve a particular problem arising with the frontal airbag, one skilled in the art would not be motivated to apply the disclosure in White et al. (of controlling deployment of a frontal airbag based on the position of the occupant) for a side airbag as suggested by the Examiner.

In the absence of such motivation, as well as the absence of any suggestion in White et al. to apply the system described therein for use with a side airbag, it would not have been obvious at the time the invention was made to modify a vehicle having an arrangement of Kaji et al. to determine the position of at least a part of an occupant and control deployment of a side airbag based on the determined position of the occupant as set forth in independent claim 20.

With respect to independent claim 28, White et al. does not teach or suggest determining whether an occupant is present in the seat and controlling deployment of a side airbag based on the presence or absence of the occupant.

Kaji et al. also does not disclose the features of claims 20 and 28.

In view of the absence of the features of claims 20 and 28 in Kaji et al. and White et al., one could not combine these references and arrive at the invention of independent claims 20 and 28, and claims 21, 22, 24, 25, 29, 30, 32 and 33 which depend from claim 20 or 28.

With respect to claims 24, 25, 32 and 33, it is respectfully submitted that it would not have been an obvious matter of design choice to mount a receiver in a door of the vehicle. The ultrasonic sensor 26 in White et al. is arranged in front of the passengers and thus provides an indication of the distance between the passenger and the fixed interior structures in front of the passenger. If the receiver was placed in the door of the vehicle, it could not reliably provide an indication of the distance between the passenger and the fixed interior structures in front of the passenger and thus would not enable the system of White et al. to accomplish its intended objective. As such, placement of the receiver of White et al. in a door of the vehicle would not only not be a matter of design choice but would not be an obvious modification to one of ordinary skill in the art.

In view of the foregoing, it would not have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Kaji et al. system in view of White et al. and arrive at the embodiments of the invention set forth in claims 20-22, 24, 25, 28-30, 32 and 33.

With respect to Issue 3, the Examiner stated that it would have been obvious to substitute the sensor 33 of Kaji et al. by the occupant position detection device disclosed in White et al. This position is respectfully traversed because sensor 33 in Kaji et al. is designed to detect a condition for which all the airbags should not be operated (col. 3, lines 56-59). In Kaji et al., for any inflation of airbags, at least a front side airbag (4FR or 4FL), a rear side airbag (8RR or 8RL) and the two center airbags 10,11 are inflated. Thus, for every inflation situation, airbags are deployed to protect at least one front-seated occupant and at least one rear-seated occupant. Sensor 33 would therefore prevent deployment of multiple airbags designed to protect multiple occupants.

The occupant position detection device of White et al. detects the position of a single occupant and controls operation of an inflator assembly based on the position assumed by that

occupant relative to fixed interior structures of the vehicle. The single-occupant position detection device of White et al. is therefore not an obvious substitute for sensor 33 in the Kaji et al. system which prevents deployment of multiple airbags for protecting multiple occupants. Since the position of a first occupant as determined by the occupant position detection device of White et al. cannot determine or affect the inflation of airbags for a second occupant whose position is not and cannot be determined by the same occupant position detection device, the device of White et al. is inapplicable in the system of Kaji et al.

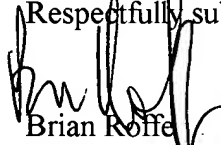
One skilled in the art would therefore not consider placing the occupant position detection device of White et al. instead of the sensor 33 in Kaji et al. because the occupant position detection device would have a detrimental effect, i.e., it would affect inflation of airbags for another occupant whose position is not being determined and for which the conditions for airbag deployment differ from the occupant whose position is being detected.

Lastly, as to the interpretation of the claims to invoke 35 U.S.C. §112, sixth paragraph, it is believed that the claims including “means plus function” language should be interpreted according to the guidelines of the U.S. Patent and Trademark Office without dependency on whether the applicant has addressed or argued the issue. It is noted though that in the arguments regarding claim 10, it was mentioned that White et al. does not teach or suggest using a wave-receiving receiver to determine whether an occupant is present in the seat and that the Examiner stated that this feature is not in claim 10. However, since claim 10 recites “determining means” and one “determining means” disclosed in the specification is a wave-receiving receiver, it would appear that applicants have made an argument consistent with the application of 35 U.S.C. §112, sixth paragraph.

An early and favorable decision on appeal is respectfully requested.

FOR THE APPLICANTS

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Brian Roffe', is written over the typed name.

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